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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,363	05/09/2005	Takashi Iizuka	US82-0402PCT	4892

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EXAMINER

CLEMENTE, ROBERT ARTHUR

ART UNIT	PAPER NUMBER
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1724

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
2 MONTHS	04/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/534,363

Applicant(s)

IIZUKA, TAKASHI

Examiner

Robert A. Clemente

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-12 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

"9" as in figure 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

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abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this case the abstract is objected to because it exceeds 150 words in length.

3. The disclosure is objected to because of the following informalities: In page 5 line

1, --steel-- should be inserted between "stainless" and "may".

Appropriate correction is required.

Allowable Subject Matter

4. Claims 3 – 12 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The examiner did not find any prior art that taught or suggested a rotary filter type particulate removing apparatus comprising: a stationary cylinder; a rotary cylinder rotatably and coaxially placed in the stationary cylinder, the rotary cylinder having a cylindrical wall, the rotary cylinder having an extending portion which extends beyond the stationary cylinder; at least one vane extending from the cylindrical wall of the rotary cylinder; a gas inlet for introducing a gas, which contains particulates, into a space between the stationary cylinder and the rotary cylinder; a plurality of holes formed in the cylindrical wall of the rotary cylinder; an opening formed in a lower part of the stationary cylinder; a trap attached to the lower part of the stationary cylinder to cover the opening; a filter provided in the rotary cylinder such that the filter extends along an inner wall of

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the cylindrical wall of the rotary cylinder; and a fan attached to the extending portion of the rotary cylinder.

US Patents No. 6,451,093 and 6,616,840; US Patent Application Publication No. 2002/0178919; and Japanese Patents No. 2001-263042, 2001-300226, and 2002-089238 represent the most relevant prior art.

US Patent No. 6,451,093 teaches a centripetal demister having a rotatable hollow shaft (22) with vanes (26) attached thereto, creating a centrifugal force to separate any moisture or particles from a gas stream. The shaft has a plurality of holes (24) to allow the gas to pass through, however, there is no teaching or suggestion for providing a filter within the hollow shaft.

US Patent No. 6,616,840 teaches a rotary separator including a stationary cylinder (1) and a rotary cylinder (2) with vanes (5) extending from the cylindrical wall. There is a filter (6) provided in the rotary cylinder, however, the cylinder does not have a plurality of holes formed in the cylindrical wall.

US Patent Application Publication No. 2002/0178919 teaches a centripetal gas purifying system having a stationary housing (6), a rotatable hollow core (7) with vanes (9), and a fan (22) attached to the hollow core through a drive shaft. There is no teaching or suggestion for including a filter within the hollow core or for having the hollow core extend beyond the stationary housing.

Japanese Patents No. 2001-263042 and 2001-300226 both teach exhaust filters with vanes attached to a shaft to impart a centrifugal force on the particles in the gas

stream. Neither, however, teaches a shaft with a plurality of holes and a filter provided within.

Japanese Patent No. 2002-089238 teaches a device for removing particulates from exhaust gas. The device includes a rotary cylinder with a plurality of holes formed in the cylindrical wall. However, there is no teaching of any vanes attached to the cylindrical wall of the rotary cylinder. Also a filter is provided outside of the rotary cylinder and not within the cylinder.

Additionally, the examiner notes that there is no combination of any of the above references that teaches all of the claimed features of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. This application is in condition for allowance except for the following formal matters:

The objections to the drawings and the specification as discussed above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Clemente whose telephone number is (571) 272-1476. The examiner can normally be reached on M-F, 8:00-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert A Clemente
Examiner
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RAC

DUANE SMITH
PRIMARY EXAMINER


4-28-07